



UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY, DOCKET NO.
09/528,986	03/20/00	SUGITA	IM22/0717

IM22/0717
ARENT FOX KINTNER PLOTKIN & KAHN
1050 CONNECTICUT AVENUE NW
SUITE 600
WASHINGTON DC 20036-5339

EXAMINER
RUTHKOSKY, R

ART UNIT	PAPER NUMBER
1745	3

DATE MAILED: 07/17/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/528,986

Applicant(s)

Sugita

Examiner

Ruthk sky, Mark

Art Unit

1745



— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Mar 20, 2000

2a) ☐ This action is FINAL.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-8 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-8 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

20) ☐ Other: _____

Art Unit: 1745

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 U.S.C. § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "the shielding member is no smaller than the thin film" is indefinite as the "no smaller" limitation does not define a shape or direction of the length or thickness. It is not clear is to what the parameters are which are no smaller than the thin film. The addition of a generic direction, such as length or circumference will overcome this rejection.

Claim Rejections - 35 U.S.C. § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

Art Unit: 1745

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wakabe et al. (US 6,136,464).

The instant claims are to a sealed battery comprising and electrode generator element, an external casing, a closure cap including a gas release valve with a thin film cover, and a shielding member between the generator element and the thin film cover of the release valve. The shield prevents electrolyte from directly striking the thin film cover and rupturing the film.

Wakabe et al. (US 6,136,464) teaches a sealed battery comprising an electrode generator element, an external casing, a closure cap including a gas release valve with a thin film cover, and a shielding member between the generator element and the thin film cover of the release valve. Two separate valves are taught. In one embodiment, the valve includes a thin film cover which is penetrated by a cutting device (see figures 4, 8, or 9 and col. 6, line 40 through col. 7). In this instance, the lead acts as the cover for vent hole formed between the terminals 104 and 105 of figure 9. The cutting device acts as a parallel barrier formed between the electrode assembly and the cover vent. Figure 4 shows packing located under the penetrating assembly. In

Art Unit: 1745

the second embodiment of figures 14 A-D, an opening is formed in the cover plate of the battery which is covered with a thin plate and a pressure plate. On the bottom of the opening is a packing material which serves as a barrier formed between the electrode assembly and the cover vent. The packing material is porous which allows for the gas to exit through the vent hole. These material prevent the electrolyte from directly contacting the thin metal cover.

The embodiments of the reference show all of the elements of the instant claims. The reference may not clearly show the embodiment where the shielding member is a plate set in parallel with the thin film where the thin film is on the exterior of the casing elements. It would be obvious to one skilled in the art at the time the invention was made to combine the embodiments of the invention to include the cutting device as a parallel barrier formed between the electrode assembly and the cover vent wherein the cover vent has a thin metal cover on the exterior of the hole as shown in figure 14. The exterior cover would also prevent the leakage of electrolyte and the cutting device would prevent the direct contact of the electrolyte. Both of these features are found in the embodiments in the reference.

Claim Rejections - 35 U.S.C. § 103

7. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07022013 A.

JP 07022013 A teaches a battery comprising an electrode assembly and a vented seal structure which prevents electrolyte from scattering and exiting the battery. The vent includes a


Art Unit: 1745

battery cover with a gas emission hole which prevents bursting of the battery. On the bottom of the hole is a space which is covered by a gasket which will prevent electrolyte from exiting the vent hole. The '013 reference does not teach the cover hole to be covered with a thin film. It is however, covered with a thin metal terminal contact. This combination allows for the gas to safely exit the cell while preventing the electrolyte from exiting through the exit hole. It would be obvious to one skilled in the art at the time the invention was made to include a shielding member for preventing the liquid electrolyte of a battery from exiting the cell or coming into contact with the casing materials in the event the battery is dropped or struck as the electrolyte may escape the contained casing.

Examiner Correspondence

8. Any inquiry regarding this communication or a previous communication should be directed to Examiner Mark Ruthkosky, Ph.D., whose telephone number is (703) 305-0587 or his supervisor, Gabrielle Brouillette, Ph.D., whose phone number is (703) 308-0756. Please note that Examiner Ruthkosky is out of the office the first Friday of each bi-week period.

The art unit 1745 unofficial fax number is 703-306-3186, while the PTO official fax number is 703-305-3599.


GABRIELLE BROUILLETTE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700